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State of California – Medi-Cal Risk Adjusting Rates Overview

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County Average Rates

- Capitation rates (Two-Plan and GMC) have been developed at a health plan specific level for 07/08 and 08/09
  - Appropriate without risk-adjusters

- Another approach would be to develop rates at a County specific level
  - Already done for COHS
  - Would be done for GMC and Two-Plan for use with risk-adjusted rates
  - Risk-adjusted rates would require a starting point of County average rates
Overview

- County specific rates would be developed on a weighted average basis to maintain budget neutrality
- All health plan data/experience in a County could/would be considered in the rate development
- Options for how to utilize Risk Adjusted County average rates include:
  - Combination of health plan specific and county average rates such as: 90%/10%, 75%/25%, or 50%/50%, (for example)
What is Risk Adjustment?

- A process to estimate health care expenses based on the disease conditions attributed to the population
- Distributes capitation payments across plans based on the health risk of the members enrolled in each plan
- Captures adverse or positive selection without using experience rating by plan (health status, not cost based)
- Rate allocation, not rate setting
Why Risk Adjust?

- Addresses the real and imagined perceptions of fairness
  - “Cherry picking” low risk individuals
  - Attracting high risk individuals

- Better matches payment to risk
  - Pay for the risk of individuals enrolled
  - Help control payment escalation and encourage efficiency
  - If actual/like technology used by medical management staff, may promote plan profitability through managing care
  - Possible incentive for plans to enter and stay in Medicaid
States that Risk Adjust Payments

- States currently (or in the process of) using risk adjustment:
  - Pennsylvania
  - New Jersey
  - Wisconsin
  - Texas
  - Michigan
  - Ohio
  - Maryland
  - Tennessee
  - New York
  - Florida
  - Delaware
  - Oregon
  - Colorado
  - Minnesota
  - South Carolina
  - Washington
  - Utah
  - Arizona
  - Massachusetts
  - Medicare (Medicare Advantage)
How Risk Adjustment Works

- Uses historical diagnosis codes and/or National Drug Codes (NDC) available on individual’s claims records as basis for risk assessment
- Certain conditions (AIDS, asthma, diabetes, etc.) and use of particular pharmaceuticals have strong link to future health care costs
- Statistical models correlate historical diagnoses/pharmaceutical utilization to likelihood of future health care cost
- Risk adjustment models in Medicaid usually contain standard (i.e., national) weights and state-specific weights
- Weights should match the managed care covered benefits of a specific State’s program
How Risk Adjustment Works

- Individuals assigned an acuity factor or “risk score” using historical data
- Plans credited with risk score of each individual enrolled
- Collective risk scores of members generate plan revenues/capitation tied to health costs
- New members that are not in the historic time period require an assumption for assessing their risk score
- Individual scores are updated on a periodic basis
- Plan assignment methodology is determined and also updated periodically
- Usually implement a minimum enrollment requirement to score an individual (scoring criteria)
Who is Risk Adjusted?

- Models are generally calibrated for different Medicaid populations
  - SSI
  - TANF Children vs. Adult

- Potential California rating categories
  - Adult and Family (combined) ≥ 18 Years
  - Children Family < 18 Years
  - Aged and Disabled (Medi-Cal only)

- Excluded California categories
  - Aged and Disabled (dual eligible)
  - BCCTP
  - AIDS
  - OBRA
  - Long Term Care
## Risk Adjusted Rates Illustration
### Application of Plan Factors

<table>
<thead>
<tr>
<th></th>
<th>Plan 1</th>
<th>Plan 2</th>
<th>Plan 3</th>
<th>All plans</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Before Risk Adjustment</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>$1,000,000</strong></td>
<td><strong>$3,000,000</strong></td>
</tr>
<tr>
<td><strong>Budget Neutral Case Mix</strong></td>
<td><strong>1.0680</strong></td>
<td><strong>0.9126</strong></td>
<td><strong>1.0194</strong></td>
<td><strong>1.0000</strong></td>
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<tr>
<td><strong>After Risk Adjustment</strong></td>
<td><strong>$1,068,000</strong></td>
<td><strong>$912,600</strong></td>
<td><strong>$1,019,400</strong></td>
<td><strong>$3,000,000</strong></td>
</tr>
</tbody>
</table>
Risk Adjustment is a Data Intensive Process

- Claims submitted by providers will be used to classify members into disease conditions
- Services to be used in the risk adjustment process will depend upon the selected risk adjustment model
  - Pharmacy-based using national drug codes
  - Facility/professional-based using diagnosis codes
  - Combination of data sources
- Data quality and completeness can significantly impact the risk scores and should be considered when selecting data to be used along with risk adjustment model
Risk Adjustment Models

- Risk adjustment models are differentiated by their data sources
  - Pharmacy-based
  - Facility/professional-based
  - Combination of data sources

- Society of Actuaries sponsored a research project that was published April 20, 2007
  - 11 risk adjustment models were evaluated for use with commercial populations (4 diagnosis based, 3 pharmacy based and 4 combination models)
  - Report did not attempt to identify which model is best, but was intended to provided useful quantitative information
  - MedicaidRx was very comparable, based on the analytical statistics, to the other models evaluated: “MedicaidRx performs surprisingly well… given that it was developed for a Medicaid population.”
The Risk Adjustment Process
Medicaid Rx Risk Assessment Overview

- **Med Rx Cost Weights**
  - (2001 – 2002, California Data, from UCSD)

- **Historical Encounter Data and Eligibility**
  - (CY2007 & 2008 from CA)

**Acuity Factors**
- (Individual Level)

**Optional: More Recent Enrollment**

**Case Mixes**
- (Plan Level)

**Base Capitation Rates**
- (Developed by Rate Team)

**Risk Adjusted Rates**
### Medicaid Rx Model
#### UCSD Cost Weights

<table>
<thead>
<tr>
<th>Category (Examples)</th>
<th>Standard Cost Weight</th>
<th>Adjusted CA Cost Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Demographics</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age 15 to 25 M</td>
<td>0.200</td>
<td>0.141</td>
</tr>
<tr>
<td>Age 15 to 25 F</td>
<td>0.535</td>
<td>0.470</td>
</tr>
<tr>
<td><strong>Disease Categories</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anti-coagulants</td>
<td>1.542</td>
<td>2.026</td>
</tr>
<tr>
<td>Asthma/COPD</td>
<td>0.218</td>
<td>0.267</td>
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<tr>
<td>Burns</td>
<td>1.61</td>
<td>0.643</td>
</tr>
<tr>
<td>Cardiac</td>
<td>0.308</td>
<td>0.568</td>
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<tr>
<td>Depression/Anxiety</td>
<td>0.375</td>
<td>0.451</td>
</tr>
<tr>
<td>Psychotic Illness / Bipolar</td>
<td>1.110</td>
<td>0.000</td>
</tr>
<tr>
<td>HIV</td>
<td>2.765</td>
<td>0.000</td>
</tr>
<tr>
<td>Pain</td>
<td>0.134</td>
<td>0.213</td>
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</tbody>
</table>

- All Cost Weights are developed by UCSD
  - Recently updated in 2008 (based on national Medicaid data from 2001 – 2002)
  - 45 disease categories
    - *Prospective and Concurrent Models* are available
- The values in the **Standard Cost Weight** column are the standard cost weights developed for Medicaid Rx
  - Include comprehensive acute services
  - Uses NDCs and individuals’ costs to estimate current or anticipated relative acuity by disease categories
  - Utilizes age/gender characteristics in the development of demographic factors
- The values in the **Adjusted CA Cost Weight** column are examples of the actual cost weights that may differ from the standard weights that reflect CA Medicaid data and Medi-Cal benefits
  - These cost weights are adjusted by UCSD
  - Modified to reflect Medi-Cal managed program parameters
Recipieent Name: John Doe
- Age/Sex: 22 Year Old/Male
- Managed Care Provider: XYZ Health Plan

<table>
<thead>
<tr>
<th>Component</th>
<th>Med Rx Category</th>
<th>Standard Cost Weight</th>
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</thead>
<tbody>
<tr>
<td>Demographic</td>
<td>Age 15 to 25 M</td>
<td>0.141</td>
</tr>
<tr>
<td>Rx Disease Condition</td>
<td>Depression/Anxiety</td>
<td>0.451</td>
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<tr>
<td></td>
<td>Cardiac</td>
<td>0.568</td>
</tr>
<tr>
<td><strong>ACUITY FACTOR</strong></td>
<td><strong>Sum of Cost Weights</strong></td>
<td><strong>1.160</strong></td>
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</table>

- Individual Acuity Factors were developed from one year of data, this is called the *study period* (i.e., base period)
  - CY2007 data with six months of run-out was used in the initial risk assessment
- Acuity Factors were developed for each scored enrollee
  - Any individual that meets a minimum enrollment requirement of six months or more of Medicaid eligibility during the study period will receive a score
Plan risk factor development:
- The Plan gets the assigned enrollees’ Acuity Factor as part of its Case Mix calculation
- Each Plan’s Case Mix is computed as the average of the Acuity Factors of all of their assigned enrollees
- A Plan’s Case Mix indicates the relative health risk of its enrollees to the other plans
- Enrollment was taken at a point in time to assign members to a plan (December 31, 2007)

<table>
<thead>
<tr>
<th>Enrollee</th>
<th>Acuity Factor</th>
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<tbody>
<tr>
<td>John Doe</td>
<td>1.160</td>
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<tr>
<td>Jane Eyre</td>
<td>0.561</td>
</tr>
<tr>
<td>Tom Sawyer</td>
<td>0.929</td>
</tr>
<tr>
<td>Scarlett O’Hara</td>
<td>1.072</td>
</tr>
<tr>
<td>Atticus Finch</td>
<td>1.009</td>
</tr>
<tr>
<td>Juliet Capulet</td>
<td>0.814</td>
</tr>
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</table>

*XYZ Health Plan Case Mix*  
Total Scored Enrollees: 6  
0.924
### County 1

<table>
<thead>
<tr>
<th>Scored Enrollees</th>
<th>XYZ Health Plan</th>
<th>Top Notch Health</th>
<th>A+ Health Care</th>
<th>Total Population</th>
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</thead>
<tbody>
<tr>
<td>MMs</td>
<td>6</td>
<td>16</td>
<td>28</td>
<td>50</td>
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<tr>
<td>Case Mix</td>
<td>0.924</td>
<td>0.980</td>
<td>1.089</td>
<td>1.034</td>
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<table>
<thead>
<tr>
<th>Unscored Enrollees</th>
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<tbody>
<tr>
<td>MMs</td>
<td>14</td>
<td>4</td>
<td>7</td>
<td>25</td>
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<td>Assumed Case Mix</td>
<td>0.924</td>
<td>0.980</td>
<td>1.089</td>
<td>0.979</td>
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<table>
<thead>
<tr>
<th>Planwide</th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MMs</td>
<td>20</td>
<td>20</td>
<td>35</td>
<td>75</td>
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<tr>
<td>Composite Case Mix</td>
<td>0.924</td>
<td>0.980</td>
<td>1.089</td>
<td>1.016</td>
</tr>
</tbody>
</table>

| Budget Neutral Case Mix | 0.910 | 0.965 | 1.072 | 1.000 |
| Risk Adjusted Rate      | $ 181.90 | $ 192.93 | $ 214.38 | $ 200.00 |

Unscored enrollees are incorporated into the Composite Case Mix as follows:
- For each plan, the same *attraction pattern* is usually assumed for unscored enrollees as for scored enrollees. Therefore, the Case Mix for the unscored enrollees is the same as the Case Mix of the scored enrollees.
- As a result, the Composite (planwide) Case Mix is the same as the scored enrollees Case Mix.
- Unscored assumptions may vary depending on the enrollment policies.

The Total Population average Case Mix is then normalized to 1.00:
- This ensures that the risk adjustment process is *Budget Neutral (BN)*.
- These normalized Case Mixes are called the *Budget Neutral Case Mixes*.

Plan-specific rates are then calculated as:

\[(BN \text{ Case Mix}) \times (\text{Base Family Rate})\]
Discussion

- Moving to Risk Adjusted County average rates would provide incentive to maximize efficiencies

- As with any change in rate development/reimbursement approach there will likely be some *perceived* “winners” and “losers”
Questions and Comments

- What data validation has DHCS/Mercer completed to determine the encounter/claims data is sufficient to support RAR?

- What model validation studies has DHCS/Mercer completed on Medicaid Rx to determine its projective modeling capabilities are sufficiently robust? What analysis was done to ensure this matches payment to risk better? Concerns with the use of only pharmacy data for risk adjustment.

- Can the risk results/information be shared? Request for transparency related to risk adjustment.

- Why was Medicaid Rx chosen? Will the Medicaid Rx model weights be re-calibrated to the most recent Medi-Cal managed care data available?
Questions and Comments

- The presentation assumed stationarity of risk. What data validation was done to confirm that this is a reasonable assumption for each of the counties and delivery systems in Medi-Cal managed care? What other options have been considered for the factors applied to new entrants (those without 6 months of eligibility)?

- The example seems to imply that the percentage of individuals in short cohort, when compared to long cohort, would remain relatively constant between the study period and the rate period. The TANF population has significant turnover, have you studied what percentage of individuals would be scored in the study period vs. the rate period? How does this turnover vary by county and health plan?
Questions and Comments

- Can the State explain their meaning of "budget neutrality"? At what level would this be done? Would the State ignore changing risk if the incoming population (short cohort) has different risk/acyuity/morbidity factors than the longer duration population? Would the rates always renormalize to 1.0?

- Will county specific rates be used only if the State is moving to risk adjusted rates?

- Will RAR be developed for all Medi-Cal populations? Would RAR be phased in or given partial credibility for the first year or two?

- Some contracted providers stated they need additional time to improve the necessary data for risk adjustment.